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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,785	02/10/2004	Haixin Yang	EL0479USNA	9363
23906 7590 04/09/2007 E I DU PONT DE NEMOURS AND COMPANY LEGAL PATENT RECORDS CENTER BARLEY MILL PLAZA 25/1128 4417 LANCASTER PIKE WILMINGTON, DE 19805			EXAMINER SHOSHO, CALLIE E	
			ART UNIT 1714	PAPER NUMBER
			MAIL DATE 04/09/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action
Before the Filing of an Appeal Brief**

Application No.

10/775,785

Applicant(s)

YANG, HAIXIN

Examiner

Callie E. Shosho

Art Unit

1714

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 22 March 2007 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 4 months from the mailing date of the final rejection.
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
(a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);
(b) ☐ They raise the issue of new matter (see NOTE below);
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: see attachment. (See 37 CFR 1.116 and 41.33(a)).

4. ☒ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
The status of the claim(s) is (or will be) as follows:
Claim(s) allowed: _____.
Claim(s) objected to: _____.
Claim(s) rejected: 1-3 and 5-18.
Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☐ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). _____.
13. ☐ Other: _____.

Callie E. Shosho
Primary Examiner
Art Unit: 1714

**Notice of Non-Compliant
Amendment (37 CFR 1.121)**

Application No.

10/775,785

Examiner

Callie E. Shosho

Applicant(s)

YANG, HAIXIN

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

The amendment document filed on 22 March 2007 is considered non-compliant because it has failed to meet the requirements of 37 CFR 1.121 or 1.4. In order for the amendment document to be compliant, correction of the following item(s) is required.

THE FOLLOWING MARKED (X) ITEM(S) CAUSE THE AMENDMENT DOCUMENT TO BE NON-COMPLIANT:

- ☐ 1. Amendments to the specification:
- ☐ A. Amended paragraph(s) do not include markings.
 - ☐ B. New paragraph(s) should not be underlined.
 - ☐ C. Other _____.
- ☐ 2. Abstract:
- ☐ A. Not presented on a separate sheet. 37 CFR 1.72.
 - ☐ B. Other _____.
- ☐ 3. Amendments to the drawings:
- ☐ A. The drawings are not properly identified in the top margin as "Replacement Sheet," "New Sheet," or "Annotated Sheet" as required by 37 CFR 1.121(d).
 - ☐ B. The practice of submitting proposed drawing correction has been eliminated. Replacement drawings showing amended figures, without markings, in compliance with 37 CFR 1.84 are required.
 - ☐ C. Other _____.
- ☒ 4. Amendments to the claims:
- ☐ A. A complete listing of all of the claims is not present.
 - ☐ B. The listing of claims does not include the text of all pending claims (including withdrawn claims)
 - ☒ C. Each claim has not been provided with the proper status identifier, and as such, the individual status of each claim cannot be identified. Note: the status of every claim must be indicated after its claim number by using one of the following status identifiers: (Original), (Currently amended), (Canceled), (Previously presented), (New), (Not entered), (Withdrawn) and (Withdrawn-currently amended).
 - ☐ D. The claims of this amendment paper have not been presented in ascending numerical order.
 - ☒ E. Other: There are no claims numbered 1 and 15.
- ☐ 5. Other (e.g., the amendment is unsigned or not signed in accordance with 37 CFR 1.4):

For further explanation of the amendment format required by 37 CFR 1.121, see MPEP § 714.

TIME PERIODS FOR FILING A REPLY TO THIS NOTICE:

1. Applicant is given **no new time period** if the non-compliant amendment is an after-final amendment or an amendment filed after allowance. If applicant wishes to resubmit the non-compliant after-final amendment with corrections, the **entire corrected amendment** must be resubmitted.
2. Applicant is given **one month**, or thirty (30) days, whichever is longer, from the mail date of this notice to supply the correction, if the non-compliant amendment is one of the following: a preliminary amendment, a non-final amendment (including a submission for a request for continued examination (RCE) under 37 CFR 1.114), a supplemental amendment filed within a suspension period under 37 CFR 1.103(a) or (c), and an amendment filed in response to a Quayle action. If any of above boxes 1. to 4. are checked, the correction required is only the **corrected section** of the non-compliant amendment in compliance with 37 CFR 1.121.

Extensions of time are available under 37 CFR 1.136(a) **only** if the non-compliant amendment is a non-final amendment or an amendment filed in response to a Quayle action.

Failure to timely respond to this notice will result in:

Abandonment of the application if the non-compliant amendment is a non-final amendment or an amendment filed in response to a Quayle action; or

Non-entry of the amendment if the non-compliant amendment is a preliminary amendment or supplemental amendment.

Legal Instruments Examiner (LIE), if applicable

Telephone No.

Attachment to Advisory Action

1. Applicants' amendment filed 3/22/07 has been fully considered but the amendment has not been entered given that (i) the amendment is not in compliance with 37 CFR 1.121 (see attached Notice of Non-Compliant Amendment) and (ii) the amendment raises new issues that would require further consideration and search.

With respect to (i), it is noted that the amendment is non-compliant given that there is no claim 1 given that the first claim in the list of pending claims has not been numbered. Further, there is no claim numbered 15 given that the number "15" has been indicated as deleted by strikethrough, i.e. ~~15~~. Additionally, the status identifier of claim 16 is incorrect. Given that claim 16 was previously added in the amendment filed 9/6/06, the proper status identifier for claim 16 is "previously presented".

With respect to (ii), applicants' amendment raises new issues that would require further consideration and search in light of the amendments to claim 1.

Specifically, claim 1 has been amended to recite "materials selected from the group consisting of conductive materials, dielectric materials, and resistive materials". Such broadening of the scope of the claims clearly raises new issues that would require further consideration and search. While previously the claims were limited to composition comprising conductive material possessing an average particle size, now, such limitation is not required. New searches would be required given that now the composition is not required to comprise such conductive material.

As an alternative to conductive material, the composition can now comprise dielectric material or resistive material.

Further claim 1 now requires “the conductive material has an average particle size (D_{50}) of 0.1 to 1.2 microns”. Given that previously the claim required average particle size (D_{50}) of greater than 0.1 microns to 1.2 microns, the amendment clearly broadens the scope of the claims with respect to the average particle size of the conductive material. Such broadening of the scope of the claims clearly raises new issues that would require further consideration and search. Additionally, the amendment raises new issues that would require further consideration given that if the amendment were entered, new grounds of rejection would need to be set forth with respect to Hirai et al. (U.S. 2003/0146019) given that Hirai et al. would now be applicable against present claims 1-3, 8-10, 12, and 14-18 under 35 USC 102(e) not 35 USC 103.

Applicants’ amendment also raises new issues that would require further consideration under 35 USC 112, second paragraph given that claim 5 has been amended to recite the limitation “said polymer” in lines 1-2. There is insufficient antecedent basis for this limitation in the claim given that there is no recitation of “polymer” in claim 1. Similar lack of antecedent basis is found in claim 9.

Applicants’ amendment also raises new issues that would require further consideration under 35 USC 112, second paragraph and 35 USC 101 with respect to each of claims 17 and 18. Specifically, claims 17-18 are indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention given that the claims provide for the use of the composition, but, since the claims do not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim

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is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced. Additionally, claims 17-18 would also be rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966). It is noted that such rejections would be overcome by changing the “use of” language in each of claims 17-18 to “A process of using”.

Further, applicants’ amendment raises new issues that would require further search in light of the addition of new claims 19-20. Given that claims 19-20 are newly added and have never been previously presented, the addition of such claims would require new searches.

Further, it is noted that even *if* the amendment were entered, the present claims would not be allowable over the cited prior art of record for the following reasons.

Applicant argues that DE 19846096 is no longer a relevant reference against the present claims in light of the amendment to claim 1 to recite “wherein the conductive material has an average particle size (D50) of 0.1 to 1.2 microns”.

However, it is noted that DE 19846096 discloses that the conductive material has average primary particle size of 100 nm which clearly overlaps the presently claimed average particle size. Even though the overlap is only at one point, the fact remains that there is overlap. DE 19846096 also discloses that the conductive material is in the form of agglomerates that possess average particle size of less than 500 nm (col.3, lines 13-14 and 21-25), which also clearly

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overlaps the average particle size presently claimed. Thus, both the primary particle size and the agglomerate particle size of the conductive material of DE 19846096 overlap the average particle size presently claimed.

Applicant also argues that DE 19846096 does not disclose viscosity of the ink as presently claimed.

However, attention is drawn to page 12, 7th paragraph of DE 19846096 that discloses that the ink possesses viscosity of less than 20 mPas.

Applicant also argues that there is no disclosure in DE 19846096 that the ink is stable for up to 24 hours as presently claimed.

Firstly, it is noted that such limitation is only found in present claim 15. Further, although there is no explicit disclosure that the ink exhibits stability up to 24 hours, given that DE 19846096 discloses ink as presently claimed, it is clear, absent evidence to the contrary, that the ink would also inherently possess same stability as presently claimed.

Applicants argue that Kodas et al. (U.S. 2003/0175411) is not a relevant reference against the present claims given that Kodas et al. disclose the use of conductive material that is nano-sized particles mixed with precursor composition while applicant's claims are directed to jet composition with large particles and low viscosity:

However, attention is called to paragraphs 31-32 of Kodas et al. that disclose that the conductive material is in the form of microparticles possessing average particle size of at least about 0.1 μm , preferably 0.3 – 3 μm which clearly meets the requirements in the present claims with respect to particle size. Further, attention is called to paragraph 349 of Kodas et al. that

discloses that the composition has viscosity of not greater than 50 cP such as 10 to 40 cP which clearly meets the requirements in the present claims regarding the viscosity. Further, while it is agreed that the composition of Kodas et al. is a precursor composition, there is nothing in the scope of the present claims which excludes the use of such composition. The present claims are drawn to ink jet printable composition. Given that paragraphs 298 and 325-326 of Kodas et al. disclose that the composition is printed onto substrate using ink jet printer, it is clear that the precursor composition of Kodas et al. is ink jet printable as presently claimed.

Applicants also argue that there is no disclosure on Kodas et al. that the ink is stable for 24 hours as presently claimed.

Firstly, it is noted that such limitation is only found in present claim 15. Further, although there is no explicit disclosure that the ink exhibits stability up to 24 hours, given that Kodas et al. discloses ink as presently claimed, it is clear, absent evidence to the contrary, that the ink would also inherently possess same stability as presently claimed.

As evidence to support their position, applicants point to paragraphs 45 and 54 of Kodas et al. that disclose that the hollow micron-size particles remain suspended or stable for at least an hour.

However, given that claim 15 requires that the ink is stable for “up to 24 hours”, which clearly includes all values up to 24 hours including at least one hour, it appears that the composition of Kodas et al. does meet the requirement of present claim 15 with respect to stability time.

Applicants also argue that Kodas et al. do not meet the requirements of the present claims with respect to the viscosity given that no temperature is disclosed in Kodas et al. with respect to

the viscosity and given that Kodas et al. disclose that the composition may be heated to reduce viscosity.

However, attention is drawn to paragraph 349 of Kodas et al. that discloses that in order for the ink to be used in an ink jet, the viscosity must not be greater than 50 cP such as 10-40 cP. Given that the composition of Kodas et al. is effectively utilized in ink jet printer and thus, is an ink jet printable composition as presently claimed, it is clear that the composition would inherently have the same viscosity at the same temperature as presently claimed.

Applicant also argues that Hirai et al. (U.S. 2003/0146019) is not a relevant reference against the present claims given that Hirai et al. do not disclose conductive material with average particle size as presently claimed.

Firstly, it is noted that *if* the amendment filed 3/14/07 were entered, Hirai et al. would be applied against present claims 1-3, 8-10, 12, and 14-18 under 35 USC 102(e) not 35 USC 103. Further, it is noted that Hirai et al. disclose that the conductive material possesses average particle size of 1-100 nm which clearly overlaps the presently claimed average particle size. Even though the overlap is only at one point, the fact remains that there is overlap.

Thus, it is clear that the conductive material of Hirai et al. does possess average particle size as presently claimed.

Applicant also argues that Shioi (U.S. 4,657,591) is not a relevant reference against the present claims given that the present invention does not contain the dyestuffs and pigments disclosed by Shioi.

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However, Shioi is not used for its teaching of pigments and dyestuffs. It is noted that Shioi is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely, that it is well known to coat metal powder with fatty acid surfactant such as stearic acid, and in combination with the primary reference, discloses the presently claimed invention.

It is further noted that *if* the amendment filed 3/22/07 were entered, the amendment would overcome the 35 USC 112, first paragraph and second paragraph rejections of record, the 35 USC 103 rejection of record utilizing DE 19486096, and the 35 USC rejections of rerecord utilizing Hirai et al., however, it is noted that Hirai et al. would be applied against the present claims under 35 USC 102(e).



Callie E. Shosho
Primary Examiner
Art Unit 1714

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4/2/07